42112_Ultrium4.qxd:Layout 1 8/21/07 6:29 PM Page 1

HP LTO Ultrium 4 Tape Drive

High capacity, performance, security and best in class reliability

HP's high performance LTO 4 tape drive sets new standards for security, capacity, performance and reliability. Compatible with LTO Ultrium 2 and LTO Ultrium 3 tape drives, HP's newest generation LTO Ultrium tape drive delivers a native capacity of 800 GB on a single cartridge and a blistering native transfer rate of up to 120 MB/s. HP LTO Ultrium 4's tape drive based AES 256-bit encryption capability adds a strong measure of security to data stored on LTO Ultrium tape media without the performance degradation associated with host based encryption or the expense and management complexity of a dedicated appliance. Interfaces include Ultra 320 SCSI, 4 Gbps Fibre Channel and 3 GB SAS.

42797_Ultrium4.qxd:Layout 1 11/8/07 3:28 PM Page 2

HP **LTO** Ultrium 4 Tape Drive

Key features and benefits

- **High Security:** Hardware AES 256 bit encryption enables customers to protect sensitive data on LTO 4 tape media in a secure, cost effective, compliant and simple manner.
- **Outstanding reliability:** Builds on the success of HP LTO Ultrium 2 and 3 with state-of-the-art reliability in a robust drive that includes Data Rate Matching, a dependable leader capture design, active head cleaner, simple tape path, and soft load/unload mechanism designed for 100,000 load/unloads.
- **Unrivaled data integrity:** Real-time read-while-write data verification and powerful error correction codes mean that even if a full track is lost or up to 32mm of tape is unreadable, all data can be recovered.
- **Backup more data in less time:** High performance backup with 432 GB/hour transfer rate and 800 GB per cartridge capacity.
- **Optimal performance:** Unique features such as data rate matching and dual mode compression ensure optimal performance to minimize the backup window and improve drive life span.
- **Investment protection:** Backward compatible to LTO Ultrium 2 and 3 media. Delivers compelling migration path that will double in capacity every generation.
- **Manageability:** Best in class total customer experience with state-of the-art manageability, diagnostic and support tools, WORM support and LTO-CM (cartridge memory).

Specifications

Capacity	800 GB native, typically 1.6 TB with hardware data compression
Recording format	
Logical recording format:	LTO Ultrium 4
Recording technology:	16 channel linear serpentine recording on half-inch tape media
Backwards compatibility	Fully read compatible with LTO Ultrium 2, LTO Ultrium 3 and LTO Ultrium 4 media. Fully write compatible with LTO Ultrium 3 and LTO Ultrium 4 media
Performance	
Data compression:	LTO-DC (enhanced version of ALDC)
Memory buffer:	128 MB plus 8 MB (SCSI, SAS) and 16 MB (FC) burst buffer
Data rate matching	Dynamically variable adaptive tape speed to match host data rate from 40-120 MB/second (native)
Interface:	4 GB Fibre Channel, 3 GB Serial Attach SCSI (SAS), U320 SCSI
Sustained transfer rate:	Up to 120 MB/second native (432 GB/hour)
Tape speed (maximum):	7.00 metres per second
Media	LTO Ultrium 4, 800 GB RW and WORM data cartridge
Reliability	
MTFB:	250,00 hours at 100% duty cycle
Corrected error rate:	1 in $1x10^{17}$ bits
Loading mechanism:	Powered load with precision eject
Head life:	60,000 hours
Power consumption	
Idle	12 Watts
Typical	30 Watts
Max	35 Watts
Power supply/required (int):	5V DC, 3.6A; 12V DC, 1.6A
Temperature	
Operating temperature range:	10 to 40°C (41 to 104°F)
Storage temperature range:	-40 to 66°C (-40 to 151°F)
Humidity range:	20 to 80% RH
Non-operating humidity:	10 to 95% RH
Safety	UL, CSA, TUV, CE, NOM, FCC, VCCI, C-tick, RRL, BCIQ, BSMI, GOSH
Physical characteristics	**(Internal product)**
Form factor:	5.25-inch wide, full-height
Dimensions (h x w x d):	82.5 x 146 x 203mm (3.25 x 5.75 x 8")
Weight:	2.24 Kg (4.94 lbs.)
Ordering Information	
PD015A	LTO Ultrium 4 SAS tape drive (generic internal)
PD090A	LTO Ultrium 4 SCSI tape drive (generic internal)
PD098A	LTO Ultrium 4 Fibre Channel automation tape drive
C7974A	LTO Ultrium 4 RW Tape Data Cartridge
C7974W	LTO Ultrium 4 WORM Tape Data Cartridge

ULTRIUM LTO 4

powered by hp invent

Native capacity/transfer rates quoted unless otherwise stated. All brand and product names are trademarks or registered trademarks of their respective companies. Technical information is subject to change without notice. Copyright © 2007 Hewlett-Packard Company. All rights reserved.